

FACT SHEET

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE COMMONWEALTH

KPDES No.: KYG040000 Permit Writer: Larry Sowder Date: August 14,
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1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Those coal mining operations, which have obtained a Permanent Program Permit from the Department for Surface Mining Reclamation and Enforcement (DSMRE), under Chapter 350 of the Kentucky Revised Statutes (KRS) and Title 405 of the Kentucky Administrative Regulations (KARs).

b. Facility Location

Within the 120 counties of the Commonwealth of Kentucky.

c. Description of Applicant's Operation

Covered activities include all forms of coal mining and processing with the following exceptions:

- 1) The coal mining operation has not been permitted under KRS Chapter 350.
- 2) New or expanded operations proposing to discharge directly into a receiving stream that has been classified as a Coldwater Aquatic Habitat or as an Outstanding State Resource Water as listed in 401 KAR 5:026, Section 5.
- 3) New or expanded operations proposing to discharge directly into or to a direct first or second order tributary of a publicly-owned lake or reservoir as listed in 401 KAR 5:026, Section 5.
- 4) New or expanded operations proposing to discharge directly into a receiving stream that has been classified as an Outstanding National Resource Water or as an Exceptional Waters as listed in 401 KAR 5:030, Section 3.
- 5) New or expanded operations involving the dredging of coal from a water of the Commonwealth.
- 6) New or expanded operations involving the wet beneficiation (washing) of coal.

- 7) New or expanded operations involving the disposal of coal slurry into waters of the Commonwealth or underground injection.
 - 8) Any operation using or proposing to use Anhydrous Ammonia as a treatment option.
 - 9) New or expanded operations within five (5) miles upstream of an existing drinking water intake.
 - 10) Any operation discharging to a water of the Commonwealth that has been listed, in the most recently developed 303(d) list, as impaired for one or more of the pollutants commonly associated with coal mining.
 - 11) Any operation that meets the definition of a coal remining operation found in Coal Mining Effluent Guidelines (Subpart G of 40 CFR Part 434).
 - 12) Any operation proposing to dispose of solid or special wastes within the mining area.
 - 13) Any operation, which the Division of Water (DOW) determines that an individual permit would better address the discharges from that operation.
- d. Production Capacity of Facility
- Varies with size and type of mineral mined.
- e. Description of Existing Pollution Abatement Facilities
- Treatment provided ranges from none to neutralization and sedimentation, depending upon the quality of the discharge.
- f. Permitting Action
- Reissuance of a general permit for approximately 3400 coal mining and associated activities in the Commonwealth of Kentucky.

2. RECEIVING WATER

- a. Receiving Water Name
- Those waters of the Commonwealth that comprise the Mississippi and Ohio River basins and subbasins within the political and geographic boundaries of Kentucky.
- b. Stream Segment Use Classification
- Warmwater Aquatic Habitat, Primary and Secondary Contact Recreation, and Drinking Water Source
- c. Stream Low Flow Condition
- The 7-day, 10-year low flow conditions of the receiving streams can range from zero (0) cubic feet per second (cfs) to 111,000 cfs for the Mississippi River.
- d. Water Quality Limited or Effluent Limited
- Because of the wide variation in the sizes of the receiving streams, both cases will occur.

3A. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Acid or Ferruginous Mine Drainage - Existing Source and New Dischargers (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

| Effluent Characteristics | Reported Monthly Average | Discharge Daily Maximum | Proposed Monthly Average | Limits Daily Maximum | Applicable Water Quality Criteria and/or Effluent Guidelines |
|--|--------------------------|-------------------------|--------------------------|----------------------|--|
| Flow (MGD) | Variable | Variable | Report | Report | 401 KAR 5:065, Section 2(8) |
| Acidity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Alkalinity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Oil & Grease | Variable | Variable | 10.0 mg/l | 15.0 mg/l | 401 KAR 5:080, Section 1(2)(c)2 |
| Total Recoverable Iron ² | Variable | Variable | 1.0 mg/l | 4.0 mg/l | 401 KAR 5:031, Section 4(1) |
| Total Iron | Variable | Variable | 3.5 mg/l | 7.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| Total Manganese | Variable | Variable | 2.0 mg/l | 4.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| Total Suspended Solids | Variable | Variable | 35.0 mg/l | 70.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| pH (standard units) | Variable | Variable | 6.0 (min.) | 9.0 (max.) | 401 KAR 5:031, Section 4(1) 401 KAR 5:065, Sections 4 and 5 |

¹ At all times acidity shall be less than alkalinity.

² Applicable only to controlled discharges to streams under low flow conditions i.e., stream flow of 0.1 cfs or less.

4A. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Acid or Ferruginous Mine Drainage - Existing Source and New Dischargers (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

b. Effluent Characteristics

| | | |
|-----------------|------------------------|------------|
| Flow | Acidity | Alkalinity |
| Oil & Grease | Total Recoverable Iron | Total Iron |
| Total Manganese | Total Suspended Solids | pH |

c. Pertinent Factors

See Attachment A for applicable definitions.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

Total Recoverable Iron, Total Iron, Total Manganese, Total Suspended Solids, and pH shall be monitored twice per month by grab sample.

Acidity, Alkalinity, and Oil & Grease shall be monitored once per month by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations cited have been duly promulgated pursuant to the requirements of Kentucky Revised Statute (KRS) Chapter 224.

Flow

The monitoring requirement for this parameter is consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease

The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgement" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Iron

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1).

Total Iron, Total Manganese, and Total Suspended Solids

The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(a), 434.23(a), 434.32, 434.33, 434.52(b)(1), and 434.53(b)(1).

pH

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(a), 434.23(a), 434.32, 434.33, 434.52(b)(1), and 434.53(b)(1).

3B. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Acid or Ferruginous Mine Drainage - New Sources (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

| Effluent Characteristics | Reported Discharge Monthly Average | Daily Maximum | Proposed Limits Monthly Average | Daily Maximum | Applicable Water Quality Criteria and/or Effluent Guidelines |
|--|--|------------------|---------------------------------------|------------------|--|
| Flow (MGD) | Variable | Variable | Report | Report | 401 KAR 5:065, Section 2(8) |
| Acidity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Alkalinity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Oil & Grease | Variable | Variable | 10.0 mg/l | 15.0 mg/l | 401 KAR 5:080, Section 1(2)(c)2 |
| Total Recoverable Iron ² | Variable | Variable | 1.0 mg/l | 4.0 mg/l | 401 KAR 5:031, Section 4(1) |
| Total Iron | Variable | Variable | 3.0 mg/l | 6.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| Total Manganese | Variable | Variable | 2.0 mg/l | 4.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| Total Suspended Solids | Variable | Variable | 35.0 mg/l | 70.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| pH (standard units) | Variable | Variable | 6.0 (min.) | 9.0 (max.) | 401 KAR 5:031, Section 4(1) 401 KAR 5:065, Sections 4 and 5 |

¹ At all times acidity shall be less than alkalinity.

² Applicable only to controlled discharges to streams under low flow conditions i.e., stream flow of 0.1 cfs or less.

4B. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Acid or Ferruginous Mine Drainage - New Sources (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

b. Effluent Characteristics

| | | |
|-----------------|------------------------|------------|
| Flow | Acidity | Alkalinity |
| Oil & Grease | Total Recoverable Iron | Total Iron |
| Total Manganese | Total Suspended Solids | pH |

c. Pertinent Factors

See Attachment A for applicable definitions.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

Total Recoverable Iron, Total Iron, Total Manganese, Total Suspended Solids, and pH shall be monitored twice per month by grab sample.

Acidity, Alkalinity, and Oil & Grease shall be monitored once per month by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations cited have been duly promulgated pursuant to the requirements of Kentucky Revised Statute (KRS) Chapter 224.

Flow

The monitoring requirement for this parameter is consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease

The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgement" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Iron

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1).

Total Iron, Total Manganese, and Total Suspended Solids

The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "New Source Performance Standards" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25(a), 434.35, and 434.55(b)(1).

pH

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1) and 5:065, Sections 4 and 5. These limits are representative of the "New Source Performance Standards" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25, 434.35, and 434.55(b)(1).

3C. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Alkaline Mine Drainage - Existing Source and New Dischargers (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

| Effluent Characteristics | Reported Discharge Monthly Average | Daily Maximum | Proposed Limits Monthly Average | Daily Maximum | Applicable Water Quality Criteria and/or Effluent Guidelines |
|--|--|------------------|---------------------------------------|------------------|--|
| Flow (MGD) | Variable | Variable | Report | Report | 401 KAR 5:065, Section 2(8) |
| Acidity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Alkalinity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Oil & Grease | Variable | Variable | 10.0 mg/l | 15.0 mg/l | 401 KAR 5:080, Section 1(2)(c)2 |
| Total Recoverable Iron ² | Variable | Variable | 1.0 mg/l | 4.0 mg/l | 401 KAR 5:031, Section 4(1) |
| Total Iron | Variable | Variable | 3.5 mg/l | 7.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| Total Suspended Solids | Variable | Variable | 35.0 mg/l | 70.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| pH (standard units) | Variable | Variable | 6.0 (min.) | 9.0 (max.) | 401 KAR 5:031, Section 4(1) 401 KAR 5:065, Sections 4 and 5 |

¹ At all times alkalinity shall be less than acidity.

² Applicable only to controlled discharges to streams under low flow conditions i.e., stream flow of 0.1 cfs or less.

4C. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Alkaline Mine Drainage - Existing Source and New Dischargers (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

b. Effluent Characteristics

| | | |
|--------------|------------------------|------------|
| Flow | Acidity | Alkalinity |
| Oil & Grease | Total Recoverable Iron | Total Iron |
| pH | Total Suspended Solids | |

c. Pertinent Factors

See Attachment A for applicable definitions.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

Total Recoverable Iron, Total Iron, Total Suspended Solids, and pH shall be monitored twice per month by grab sample.

Acidity, Alkalinity, and Oil & Grease shall be monitored once per month by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations cited have been duly promulgated pursuant to the requirements of Kentucky Revised Statute (KRS) Chapter 224.

Flow

The monitoring requirement for this parameter is consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease

The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgement" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Iron

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1).

Total Iron and Total Suspended Solids

The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(b), 434.23(b), 434.42, 434.43, 434.52(b)(2), and 434.53(b)(2).

pH

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(b), 434.23(b), 434.42, 434.43, 434.52(b)(2), and 434.53(b)(2).

3D. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Alkaline Mine Drainage - New Source (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

| Effluent Characteristics | Reported Discharge Monthly Average | Daily Maximum | Proposed Limits Monthly Average | Daily Maximum | Applicable Water Quality Criteria and/or Effluent Guidelines |
|--|--|------------------|---------------------------------------|------------------|--|
| Flow (MGD) | Variable | Variable | Report | Report | 401 KAR 5:065, Section 2(8) |
| Acidity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Alkalinity (as mg/l CaCO_3) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Oil & Grease | Variable | Variable | 10.0 mg/l | 15.0 mg/l | 401 KAR 5:080, Section 1(2)(c)2 |
| Total Recoverable Iron ² | Variable | Variable | 1.0 mg/l | 4.0 mg/l | 401 KAR 5:031, Section 4(1) |
| Total Iron | Variable | Variable | 3.0 mg/l | 6.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| Total Suspended Solids | Variable | Variable | 35.0 mg/l | 70.0 mg/l | 401 KAR 5:065, Sections 4 and 5 |
| pH (standard units) | Variable | Variable | 6.0 (min.) | 9.0 (max.) | 401 KAR 5:031, Section 4(1) 401 KAR 5:065, Sections 4 and 5 |

¹ At all times alkalinity shall be less than acidity.

² Applicable only to controlled discharges to streams under low flow conditions i.e., stream flow of 0.1 cfs or less.

4D. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Alkaline Mine Drainage - New Source (Active Mining Areas Coal Preparation Plant and Associated Areas) and Post Mining Areas (Underground Mine Drainage).

b. Effluent Characteristics

| | | |
|--------------|------------------------|------------|
| Flow | Acidity | Alkalinity |
| Oil & Grease | Total Recoverable Iron | Total Iron |
| pH | Total Suspended Solids | |

c. Pertinent Factors

See Attachment A for applicable definitions.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

Total Recoverable Iron, Total Iron, Total Suspended Solids, and pH shall be monitored twice per month by grab sample.

Acidity, Alkalinity, and Oil & Grease shall be monitored once per month by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations cited have been duly promulgated pursuant to the requirements of Kentucky Revised Statute (KRS) Chapter 224.

Flow

The monitoring requirement for this parameter is consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease

The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgement" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Iron

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1).

Total Iron and Total Suspended Solids

The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "New Source Performance Standards" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25(b), 434.45, and 434.55(b)(2).

pH

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1) and 5:065, Sections 4 and 5. These limits are representative of the "New Source Performance Standards" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25(b), 434.45, and 434.55(b)(2).

3E. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Post Mining Areas - Existing Sources, New Dischargers, and New Sources.

| Effluent Characteristics | Reported Discharge | | Proposed Limits | | Applicable Water Quality Criteria and/or Effluent Guidelines |
|--|--------------------|---------------|-----------------|-----------------------|--|
| | Monthly Average | Daily Maximum | Monthly Average | Daily Maximum | |
| Flow (MGD) | Variable | Variable | Report | Report | 401 KAR 5:065, Section 2(8) |
| Acidity (as mg/l CaCO ₃) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Alkalinity (as mg/l CaCO ₃) ¹ | Variable | Variable | Report | Report | 401 KAR 5:080, Section 1(2)(c)2 |
| Oil & Grease | Variable | Variable | 10.0 mg/l | 15.0 mg/l | 401 KAR 5:080, Section 1(2)(c)2 |
| Settleable Solids | Variable | Variable | N/A | 0.5 ml/l ² | 401 KAR 5:065, Sections 4 and 5 |
| pH (standard units) | Variable | Variable | 6.0 (min.) | 9.0 (max.) | 401 KAR 5:031, Section 4(1) 401 KAR 5:065, Sections 4 and 5 |

¹ At all times acidity shall be less than alkalinity.

² The limitation for Settleable Solids is an instantaneous maximum.

4E. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Post Mining Areas - Existing Sources, New Dischargers, and New Sources.

b. Effluent Characteristics

| | | |
|--------------|-------------------|------------|
| Flow | Acidity | Alkalinity |
| Oil & Grease | Settleable Solids | pH |

c. Pertinent Factors

See Attachment A for applicable definitions.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected once per month for the first six (6) months after Phase One Bond Release, then once per quarter thereafter, unless otherwise notified.

Acidity, Alkalinity, Settleable Solids, and Oil & Grease shall be monitored once per month by grab sample for the first six (6) months after Phase One Bond Release, then once per quarter thereafter, unless otherwise notified.

e. Justification of Limits

The Kentucky Administrative Regulations cited have been duly promulgated pursuant to the requirements of Kentucky Revised Statute (KRS) Chapter 224.

Flow

The monitoring requirement for this parameter is consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease

The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgement" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Settleable Solids

The limits for this parameter are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT), "Best Available Technology Economically Achievable" (BAT) and "New Source Performance Standards" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(a), 434.53(a), and 434.55(a).

pH

The limits for this parameter are consistent with the requirements of 401 KAR 5:031, Section 4(1) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT), "Best Available Technology Economically Achievable" (BAT) and "New Source Performance Standards" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(a), 434.53(a), and 434.55(a).

5. ANTIDEGRADATION

The conditions of 401 KAR 5:029, Section 1(1) have been satisfied by this permit action. A review under Section 1(2), (3), and (4) is not applicable.

6. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

The permittee shall attain compliance with the permit conditions on the effective date of this permit.

Within ninety (90) days of the effective date of this permit, all permittees shall submit: (1) a mine map of the area clearly identifying all KPDES discharge points, (2) the latitude and longitude of each point, and (3) the status of the discharge point, i.e. active or proposed.

7. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

a. 401 Water Quality Certifications

The conditions of a 401 Water Quality Certification issued by the DOW in response to either an individual or nationwide Section 404 permit from the Corps of Engineers for any operation covered by this general permit shall be incorporated as fully enforceable requirements of this general permit.

b. Alkaline Mine Reclassification

To reclassify a previously determined acid mine drainage discharge to an alkaline mine drainage discharge, the permittee must satisfactorily demonstrate to the DOW that the mine drainage, prior to treatment, has a pH greater than or equal to 6.0 standard units and a Total Iron concentration less than 10 mg/l. This will require the submittal of at least six (6) months of data to characterize the pH and the Total Iron concentration of the influent or untreated effluent.

c. Alternate Effluent Limitations

1. pH

Pursuant to 401 KAR 5:065, Sections 4 and 5 (40 CFR Part 434.62), the permit issuing authority may allow the pH level in the final effluent to exceed 9.0 standard units to a small extent in order that the Manganese limitations may be achieved when the application of neutralization and sedimentation treatment technology results in the inability to comply. This alternate pH limitation shall be granted upon request for a specific discharge, provided the operator submits sufficient documentation, with the Discharge Monitoring Report (DMR), that an effluent pH of greater than 9.0 standard units was required to achieve the Manganese limitation. However, under no circumstances shall the pH exceed 10.0 standard units.

2. Precipitation

Pursuant to the requirements of 401 KAR 5:065, Section 4(2) (40 CFR Part 434.63), precipitation induced discharges are eligible for alternate effluent limits. The applicable alternate limits are a function of the size of the precipitation event and the type of operation and shall be granted on an event by event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described. This could be in the form of precipitation data, weir flow measurements, dated photographs, or equivalent proof of record. This information shall be submitted with the Discharge Monitoring Report (DMR). The following alternate limitations are available:

7. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE (continued)**

c. Alternate Effluent Limitations (continued)

2. Precipitation (continued)

- (a) (1) The alternate limitations specified in Paragraph (a)(2) of this section apply with respect to:
- (i) All discharges of alkaline mine drainage except discharges from underground workings of underground mines that are not commingled with other discharges eligible for these alternate limitations;
 - (ii) All discharges from steep slope areas;
 - (iii) Discharges from preparation plant associated areas (excluding acid mine drainage from coal refuse disposal piles).
- (2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION RUNOFF

| <u>POLLUTANT OR POLLUTANT PROPERTY</u> | <u>EFFLUENT LIMITATIONS</u> |
|--|--------------------------------|
| Settleable Solids | 0.5 ml/l instantaneous maximum |
| pH | 6.0 - 9.0 at all times |

- (b) The following alternate limitations apply with respect to acid or ferruginous discharges from coal refuse disposal piles:

Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 1-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume), may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION RUNOFF

| <u>POLLUTANT OR POLLUTANT PROPERTY</u> | <u>EFFLUENT LIMITATIONS</u> |
|--|--------------------------------|
| Settleable Solids | 0.5 ml/l instantaneous maximum |
| pH | 6.0 - 9.0 at all times |

7. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE (continued)**

c. Alternate Effluent Limitations (continued)

2. Precipitation (continued)

(c) The following alternate limitations apply with respect to acid or ferruginous mine drainage, except for discharges addressed above in Paragraph (a) (mountaintop removal and steep slope areas), discharges addressed below in Paragraph (d) (controlled surface mine discharges), and Paragraph (f) (discharges from underground workings of underground mines):

- (1) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to 2-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION RUNOFF

| <u>POLLUTANT OR POLLUTANT PROPERTY</u> | <u>EFFLUENT LIMITATIONS</u> |
|--|--------------------------------|
| Iron (total) | 7.0 mg/l daily maximum |
| Settleable Solids | 0.5 ml/l instantaneous maximum |
| pH | 6.0 - 9.0 at all times |

- (2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 2-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION RUNOFF

| <u>POLLUTANT OR POLLUTANT PROPERTY</u> | <u>EFFLUENT LIMITATIONS</u> |
|--|--------------------------------|
| Settleable Solids | 0.5 ml/l instantaneous maximum |
| pH | 6.0 - 9.0 at all times |

7. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE (continued)**

c. Alternate Effluent Limitations (continued)

2. Precipitation (continued)

- (d) (1) The alternate limitations specified in Paragraph (d)(2) of this section apply with respect to all discharges described in Paragraphs (a), (b), and (c) of this section and to:
 - (i) Discharges of acid mine drainage from underground workings of underground mines which are commingled with other discharges eligible for these alternate limitations;
 - (ii) Controlled acid surface mine discharges; and
 - (iii) Reclamation areas.
- (2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION RUNOFF

| <u>POLLUTANT OR POLLUTANT PROPERTY</u> | <u>EFFLUENT LIMITATIONS</u> |
|--|-----------------------------|
| pH | 6.0 - 9.0 at all times |

- (e) The operator shall have the burden of proof that the discharge or increase in the discharge was caused by the applicable precipitation event described in Section 2. This could be in the form of precipitation data, weir flow measurements, or equivalent proof of record. This information shall be submitted with the Discharge Monitoring Report (DOW DMR-01 COAL ONLY) at the end of the quarterly monitoring period.
- (f) Discharges of mine drainage from underground workings of underground mines, which are not commingled with discharges eligible for the alternate limitations shall in no event be eligible for the alternate limitations.
- (g) The applicable alternate limits are a function of the size of the precipitation event and the type of operation and shall be granted on an event by event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described. These alternate limits do not effect the parameters of Flow, Total Recoverable Iron, Oil & Grease, Acidity, and Alkalinity.

The following table summarizes these alternate precipitation effluent limitations.

TABLE 1 - ALTERNATE PRECIPITATION EVENT EFFLUENT REQUIREMENTS

| TYPE OF DISCHARGE | PRECIPITATION EVENT | | | |
|---|-----------------------------------|--------------------------|--------------------------|--------------------------|
| | Discharge caused by precipitation | 1-yr, 24-hr event | 2-yr, 24-hr event | 10-yr, 24-hr event |
| Discharges from underground workings of underground mines not commingled including alkaline mines | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS |
| Discharges of dredge return water | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS |
| Discharges from underground workings of underground mines commingled | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | pH |
| Controlled surface mine drainage (except steep slope and mountaintop removal) | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | NO ALTERNATE LIMITATIONS | pH |
| Non-controlled surface mine drainage (except steep slope and mountaintop removal) | SS, pH, Fe | SS, pH, Fe | SS, pH | pH |
| Discharges from coal refuse disposal piles | NO ALTERNATE LIMITATIONS | SS, pH | SS, pH | pH |
| Discharges from steep slope and mountaintop removal areas | SS, pH | SS, pH | SS, pH | pH |
| Discharges from preparation plant associated areas (excluding coal refuse disposal piles) | SS, pH | SS, pH | SS, pH | pH |
| Alkaline Mine Drainage | SS, pH | SS, pH | SS, pH | pH |
| Reclamation Areas | SS, pH | SS, pH | SS, pH | pH |
| The abbreviations Fe and SS mean Total Iron and Settleable Solids respectively. | | | | |
| The applicable alternate limits are a function of the size of the precipitation event and the type of operation and shall be granted on an event by event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described. | | | | |
| These alternate limits do not effect the parameters of Flow, Total Recoverable Iron, Oil & Grease, Acidity, and Alkalinity. | | | | |

7. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE (continued)**

d. Authorization to Discharge

The permittee is authorized to discharge under the terms of the general permit upon receipt of written notification by the DOW and upon the issuance of a fully effective permanent program permit by DSMRE.

e. Best Management Practices (BMP) Plan

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224. The facility has several areas where support activities occur which have a potential of the discharge of such substances through storm water runoff or spillage. Some of these areas will drain to present wastewater treatment plants, others will not. The BMP Plan shall incorporate the elements of the Groundwater Protection Plans required by 401 KAR 5:037.

f. Commingling of Wastestreams

Where wastestreams from any facility covered by this permit are combined for treatment or discharge with wastestreams from another facility, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component wastestream of the discharge. This requirement is consistent with the requirements of 401 KAR 5:065, Sections 4 and 5 (40 CFR Part 434.61).

g. Compliance Monitoring Points

Samples taken in compliance with the monitoring requirements specified in this permit shall be taken at the following location: at nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters. Should this point be an in-stream treatment facility, the overflow from that facility shall be the compliance point provided it has the requisite 404 Permit. If the structure does not have a 404 Permit, then the discharge into the structure is the compliance point. In the case of hollow fills and similar structures, the sediment structure immediately below the toe of the fill will be the compliance point provided the stream reach between the toe of the fill and the pond is included in the DSMRE permit. If this is not the case, then the discharge from the toe of the fill is the compliance point.

h. Determination of Discharge Classification

Unless otherwise specified any operation covered under the general permit will be initially classified as a New Source Acid or Ferruginous Mine Drainage and all discharges shall be subject to the requirements found on page 5 of this Fact Sheet or page I-2 of the permit. If the permittee disagrees with this classification then adequate documentation must be provided to the Division of Water to justify a different classification.

7. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE (continued)

i. In-stream Monitoring Requirements

1. pH
Where a controlled discharge occurs the permittee shall establish a downstream monitoring location to monitor in-stream pH to insure that the in-stream pH does not fluctuate more than one (1) standard unit over a 24-hour period. This monitoring shall be done prior to a controlled discharge, during the discharge, and immediately after cessation of the discharge. Results of these samples shall be submitted with the Discharge Monitoring Report (DMR) for that discharge.
2. Total Recoverable Iron
Where controlled discharges occur, the permittee shall establish an upstream monitoring location to measure stream flow during the period of discharge. Results of this measurement shall be submitted with the Discharge Monitoring Report (DMR) for that discharge. If the receiving stream flow is below 0.1 cubic feet per second, then the limits for Total Recoverable Iron will apply.

j. In-stream Treatment or Disposal Facilities

This permit does not authorize the construction or use of in-stream treatment or disposal facilities (sediment ponds, hollow fills, valley fills, slurry ponds, etc.) Such authorization is within the jurisdiction of the Corps of Engineers (COE) and is implemented through the Section 404 permitting program of the Clean Water Act. Since the COE is a federal agency, this permitting action requires the issuance of a Section 401 Water Quality Certification by the DOW. The 401 Water Quality Certification is hereby incorporated by reference into the KPDES permit as enforceable requirements.

k. Storm Water Management

All storm water runoff within the boundary of the Surface Disturbance Mining Permit shall be, to the extent possible, diverted to either the pit or to sediment control structures. Storm water that cannot be diverted shall be addressed under the BMP Plan. During the initial phases of site preparation, Best Management Practices shall be employed to control sediment until permanent sediment control structures are constructed and placed in operation.

8. PERMIT DURATION

Five (5) years.

9. PERMIT INFORMATION

The application, draft permit, fact sheet, public notice, comments received, and additional information is available from the DOW at 14 Reilly Road, Frankfort Office Park, Frankfort, Kentucky 40601.

10. REFERENCES AND CITED DOCUMENTS

All material and documents referenced or cited in this fact sheet are a part of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

11. CONTACT

For further information contact the individual identified on the Public Notice or the Permit Writer - Larry Sowder at (502) 564-2225, extension 472 or e-mail Larry.Sowder@mail.state.ky.us.

12. PUBLIC NOTICE INFORMATION

Please refer to the attached Public Notice for details regarding the procedures for a final permit decision, deadline for comments, and other information required by KAR 5:075, Section 4(2)(e).

ATTACHMENT A FACT SHEET KPDES COAL GENERAL PERMIT - DEFINITIONS

- (a) The terms "1-year, 2-year, and 10-year, 24-hour precipitation events" mean the maximum 24-hour precipitation event with a probable recurrence interval of once in one (1), two (2), and ten (10) years, respectively, as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.
- (b) The term "abandoned mine" means a mine where mining operations have occurred in the past, and (1) the applicable reclamation bond or financial assurance has been released or forfeited or (2) if no reclamation bond or other financial assurance has been posted, no mining operations have occurred for five (5) years or more.
- (c) The term "acid or ferruginous mine drainage" means mine drainage which, before any treatment, either has a pH of less than 6.0 or a Total Iron concentration equal to or greater than 10.0 mg/l.
- (d) The term "active mining area" means the area, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas, and post-mining areas.
- (e) The term "alkaline mine drainage" means mine drainage, which before any treatment has a pH equal to or greater than 6.0 and Total Iron concentration of less than 10.0 mg/l.
- (f) The term "calendar day" means for the purpose of this permit, any 24-hour period.
- (g) The term "coal preparation plant" means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility.
- (h) The term "coal preparation plant associated areas" means the coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.
- (i) The term "coal preparation plant water circuit" means all pipes, channels, basins, tanks, and all other structures and equipment that convey, contain, treat, or process any water that is used in coal preparation processes within a coal preparation plant.
- (j) The term "coal refuse disposal pile" means any coal refuse deposited on the earth and intended as permanent disposal or long-term storage (greater than 180 days) of such material, but does not include coal refuse deposited within the active mining area or coal refuse never removed from the active mining area.
- (k) The term "coal remining operation" means a coal mining operation at a site on which coal mining was previously conducted and where the site has been abandoned or the performance bond has been forfeited.
- (l) The term "controlled surface mine drainage" means any surface mine drainage that is pumped or siphoned from the active mining area.
- (m) The term "daily maximum concentration" means the daily determination of concentration as an instantaneous maximum that cannot be exceeded by any sample.
- (n) The term "existing source coal mine" means a coal which the DOW determines is neither a "new source coal mine" nor a "new discharger coal mine."

ATTACHMENT A FACT SHEET KPDES COAL GENERAL PERMIT - DEFINITIONS

- (o) The term "expanded operation" means any amendment or revision of a mining plan which meets conditions 2, 3, or 5 of the term "major alteration". See definition 19.
- (p) The term "final bond release" means the time at which the Department for Surface Mining Reclamation and Enforcement returns any remaining reclamation or performance bond based upon its determination that reclamation work (including, in the case of underground mines, mine sealing, and abandonment procedures) and revegetation requirements have been satisfactorily completed.
- (q) The term "grab sample" means a single influent or effluent portion collected in less than fifteen (15) minutes at the period most representative of the total discharge.
- (r) The term "instantaneous maximum" means the maximum value not to be exceeded at any time.
- (s) The term "major alteration" means a coal mine for which the DOW determines that a new, altered, or increased discharge of pollutants has occurred after May 29, 1981, in connection with the mine for which the KPDES permit is being considered. In making this determination, the DOW shall take into account one (1) or more of the following events:
 - 1) Extraction of a coal seam not previously extracted by that mine;
 - 2) Discharge into a drainage area not previously affected by wastewater discharges from the mine;
 - 3) Extensive new surface disturbance at the mining operation;
 - 4) Construction of a new shaft, slope, or drift; and
 - 5) Such other factors as the Director of the DOW deems relevant.
- (t) The term "mine drainage" means any drainage and any water pumped or siphoned from an active mining area or a post-mining area.
- (u) The abbreviation "ml/l" means milliliters per liter.
- (v) The term "monthly average concentration" means the arithmetic average of all sample concentrations collected during a calendar month.
- (w) The term "new discharger coal mine" means a coal mine:
 - 1) from which there is or may be a new or additional discharge of pollutants at a site at which on August 13, 1979, it had never discharged pollutants; and
 - 2) which has never received a finally effective KPDES or NPDES permit for discharge at that site; and
 - 3) which is not a new source.
- (x) The term "new source coal mine" means a coal mine (excluding coal preparation plants and coal preparation plant associated areas) including an abandoned mine which is being remined, on which construction is commenced after May 4, 1984; or which is determined by the Director of the DOW to constitute a "major alteration" as defined in PART I, E. 18.
- (y) The term "phase I reclamation bond release" means release by the Department for Surface Mining Reclamation and Enforcement of a portion of the performance bond after the following work has been completed: backfilling, regrading, top soil replacement, drainage control work, including soil preparation, regrading, seeding, planting, and mulching in accordance with the approved reclamation plan.
- (z) The term "point source" means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, culvert, tunnel, conduit, well, discrete fissure, container, wet seals, mine adits, seeps, or sumps, from which pollutants are or may be discharged.

ATTACHMENT A FACT SHEET KPDES COAL GENERAL PERMIT - DEFINITIONS

- (aa) The term "post-mining area" means:
- 1) A reclamation area; or
 - 2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.
- (bb) The term "reclamation area" means the surface area of a coal mine, which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced.
- (cc) The term "settleable solids" is that matter measured by the volumetric method specified in §434.64.
- (dd) The terms "treatment facility" and "treatment system" mean all structures which contain, convey, and as necessary, chemically or physically treat coal mine drainage, coal preparation plant process wastewater, or drainage from coal preparation plant associated areas, which remove pollutants regulated by this part from such waters. This includes all pipes, channels, ponds, basins, tanks, and all other equipment serving such structures.
- (ee) The term "underground workings of an underground mine" means the underground workings including shafts, adits, support facilities, etc. of an underground mine, but excludes surface disturbances associated with the underground mine.